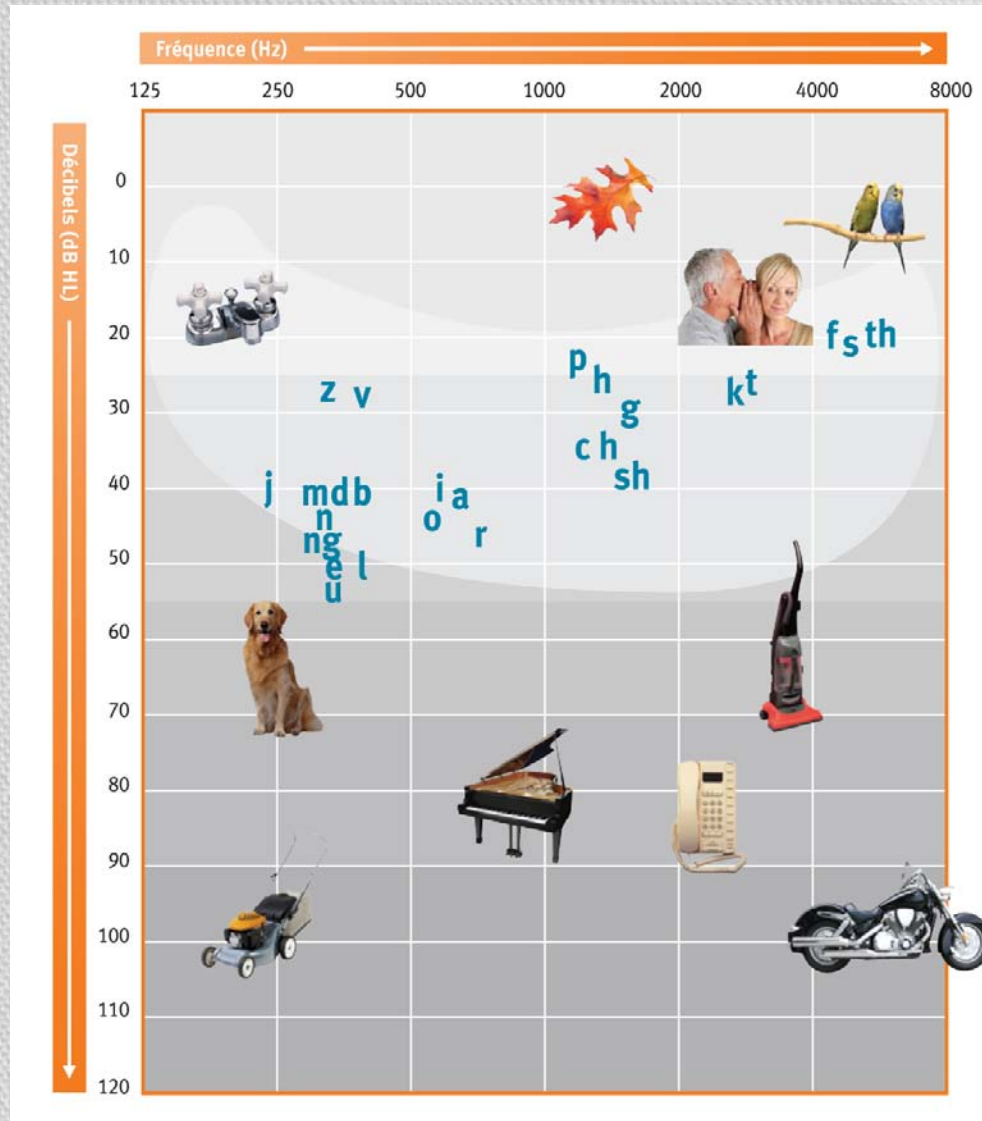


COMPARISON OF TWO VERIFICATION METHODS FOR FREQUENCY- LOWERING HEARING AIDS IN CHILDREN WITH HIGH-FREQUENCY HEARING LOSS

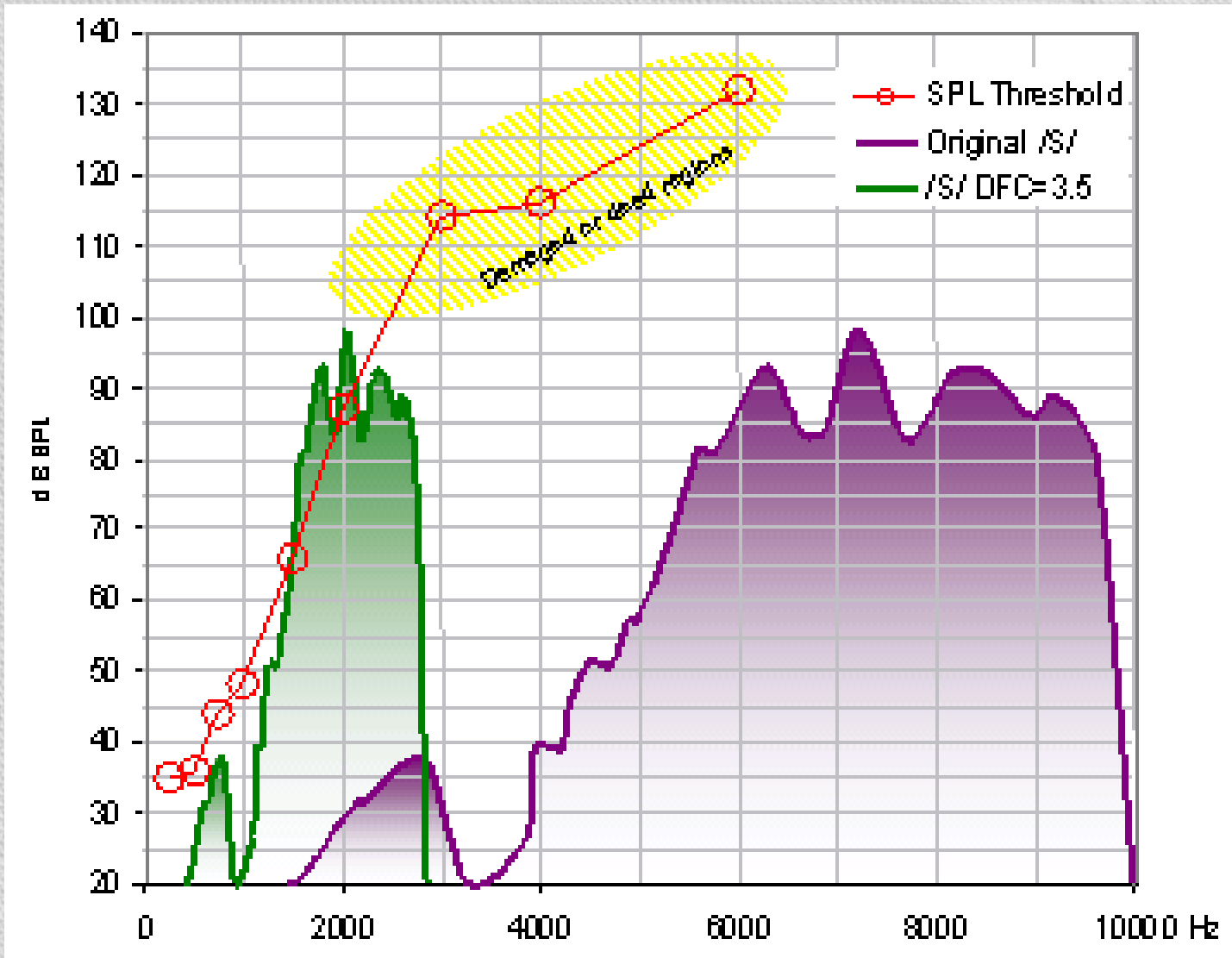
Brandy Chance

LEND trainee in Audiology

Introduction



Introduction

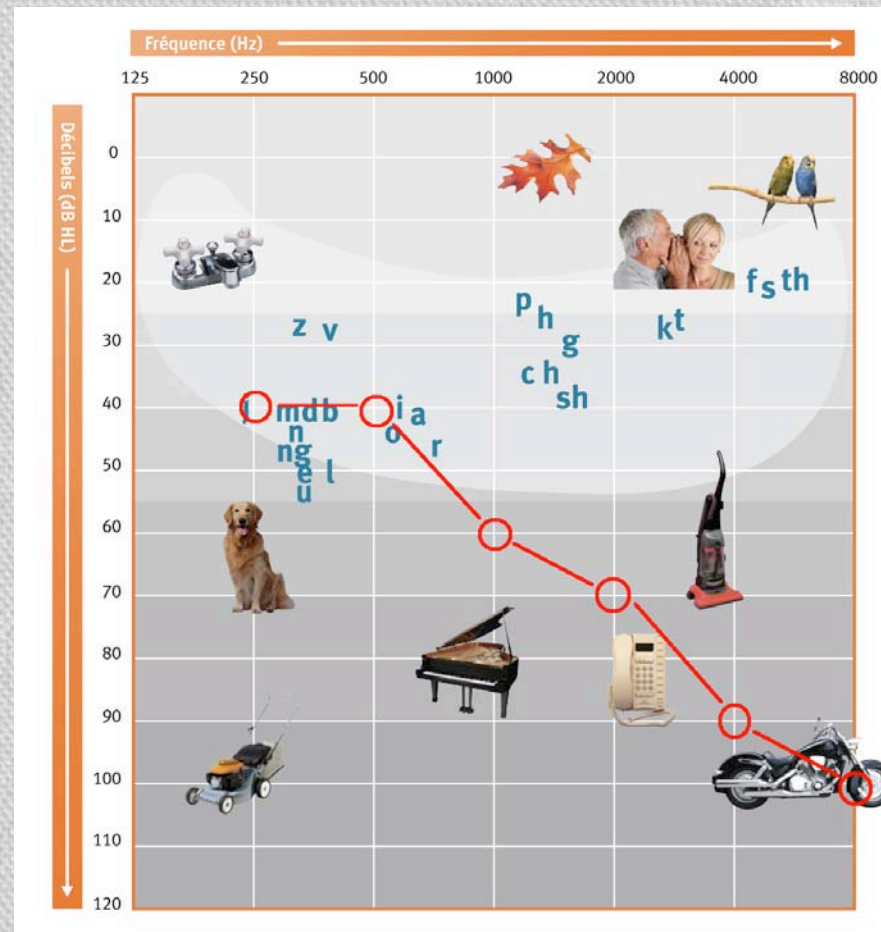


Verification Measures

- Aided Ling sound detection
 - Individual speech sounds spoken at a conversational level
- Aided warble tone detection
 - Tones presented at different frequencies

Subjects

- 10 children age 20 months to 16 years
- All have high-frequency hearing loss



Methods

- Data Collection
 - Data collected from existing patient charts
 - Two pediatric audiology clinics
- Areas of comparison:
 - 1. Ability of the test to verify the audibility of high-frequency speech sounds
 - 2. Ability to predict generalizability of phoneme detection skills in real-world settings.
 - 3. Usefulness for determining which hearing aid type to use on an individual basis.

Results

Aided Ling Sound Detection Scores for Individual Subjects		
Hearing Aid Type	Subject Number	Phonemes Detected
Frequency Lowering	1	<i>f</i>
	2	S, <i>f</i>
	3	S, <i>f</i>
Conventional	4	S, <i>f</i>
	5	Neither

Results

Aided Warble Tone Thresholds for Individual Subjects					
Hearing Aid Type	Subject Number	Aided Thresholds (dBHL)			
		500 Hz	1000 Hz	2000 Hz	4000 Hz
Frequency Lowering	6	5	10	15	15
	7	10	20	25	30
Conventional	8	20	15	20	35
	9	15	25	35	45
	10	30	35	30	45

Results

- 1. Ability to verify audibility of speech sounds-
Ling Sounds
- 2. Ability to predict generalizability of
phoneme detection skills in real-world
settings- Ling Sounds
- 3. Usefulness for determining which hearing
aid to use- Ling Sounds.

Discussion

- Ling sound testing is a better verification tool than warble tone detection.
- Warble tones may be more valid if tested out to 8000 Hz
- Future research could involve more children and use standardized testing methods instead of testing done in a clinical setting



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